

Remarks

Applicants respectfully request reconsideration of the present application in view of the foregoing Amendments and the following remarks. Claims 1-11, 14-24, 27-37, and 42-53 are pending. Claims 12, 13, 25, 26, and 38-41 are subject to restriction and/or election requirement. Claims 1-11, 14-24, 27-37, and 42-53 are rejected. These rejections are respectfully traversed. Claims 1, 3, 5, 9, 14, 18, 22, 27, 31, and 35 are independent. Claims 1, 2, 5, 9, 14, 18, 22, 27, 31, and 35 have been amended.

Patentability of Claims 1-11, 14-24, 27-37, and 42-53 over Ishikawa under § 102(e)

Claims 1-11, 14-24, 27-37, and 42-53 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,457,165 to Ishikawa et al. ("Ishikawa"). These rejections are respectfully traversed.

Applicant respectfully submits that the claims in their present form are allowable over Ishikawa. For a 102(e) rejection to be proper, the cited art must show each and every element as set forth in the claim (*see* MPEP § 2131.01). Ishikawa does not so show.

Claims 1, 2, 4, 14-17, 27-30, and 42-51

Independent claims 1, 14, and 27 each recite in part:

inputting a netlist, the netlist comprising nodes identifying a plurality of interconnected components comprising a first component, a second component, and a third component, at least one connection between the first component and the second component, and at least one connection between the second component and the third component;

determining a plurality of connectivity strengths comprising a first connectivity strength comprising a number of the at least one connection between the first component and the second component and a second connectivity strength comprising a number of the at least one connection between the second component and the third component;

sorting the netlist at least in part according to the plurality of connectivity strengths;

generating symbols and connections formed according to the netlist and at least in part according to the plurality of connectivity strengths;

Applicants respectfully submit that Ishikawa does not show determining a plurality of connectivity strengths comprising a first connectivity strength comprising a number of the at least one connection between the first component and the second component and a second connectivity strength comprising a number of the at least one connection between the second

component and the third component or sorting the netlist at least in part according to the plurality of connectivity strengths, as recited in each of independent claims 1, 14, and 27.

For example, Ishikawa is understood to describe a route/wiring linking means that wire-connects a plurality of auxiliary units having positions that have been assigned by a position assigning means through a selective route on a route drawing, and linking wiring information on the auxiliary units to routing information on the selected route (*see, e.g.*, col. 2, lines 51-57, as noted in the Action). Ishikawa is also understood to describe an auxiliary unit position assigning section that reads out wiring information and makes it displayed on the screen, as well as a route/wiring linking section that wire-connects auxiliary units in a shortest route through passing points and routes on a route drawing (*see, e.g.*, col. 9, lines 6-44).

Applicants respectfully submit, however, that neither the cited section nor any other section in Ishikawa is understood to show determining a connectivity strength, let alone determining a plurality of connectivity strengths comprising a first connectivity strength comprising a number of the at least one connection between the first component and the second component and a second connectivity strength comprising a number of the at least one connection between the second component and the third component, as recited in each of independent claims 1, 14, and 27.

Additionally, Applicants respectfully submit that nothing in Ishikawa is understood to show sorting a netlist, let alone sorting the netlist at least in part according to the plurality of connectivity strengths, as recited in each of independent claims 1, 14, and 27.

Therefore, Ishikawa does not show “determining a plurality of connectivity strengths comprising a first connectivity strength comprising a number of the at least one connection between the first component and the second component and a second connectivity strength comprising a number of the at least one connection between the second component and the third component” or “sorting the netlist at least in part according to the plurality of connectivity strengths,” as recited in each of independent claims 1, 14, and 27. Accordingly, Applicants respectfully submit that the 35 U.S.C. § 102(e) rejections should be withdrawn from independent claims 1, 14, and 27.

Dependent claims 2, 4, and 42-51; 15-17; and 28-30 depend from independent claims 1, 14, and 27, respectively, and are allowable for at least the reasons recited above in support of their parent claims 1, 14, and 27. They are also independently patentable. Accordingly,

Applicants respectfully submit that the 35 U.S.C. § 102(e) rejections of claims 2, 4, 15-17, 28-30, and 42-51 should be withdrawn.

Claim 3

Independent claim 3 recites in part: “generating a wiring harness diagram, wherein the wiring harness diagram comprises the symbols and the connections, and wherein generating the wiring harness diagram comprises positioning a pin on a side of a first symbol, the side selected according to a connectivity strength corresponding to the number of connections between the first symbol and a second symbol.”

Ishikawa does not show anything having to do with selecting a side according to a connection between a first symbol and a second symbol, let alone positioning a pin on a side of a first symbol, the side selected according to a connection between the first symbol and a second symbol, as recited in independent claim 3. Ishikawa is understood to concern itself with selecting routes to minimize wire lengths between auxiliary units (see col. 9, lines 45-56), but there is no mention of selecting sides of symbols, much less according to a connection between the symbols. Where is this shown in Ishikawa?

Therefore, Ishikawa does not show “positioning a pin on a side of a first symbol, the side selected according to a connection between the first symbol and a second symbol,” as recited in independent claim 3. Accordingly, Applicants respectfully submit that the 35 U.S.C. § 102(e) rejection of independent claim 3 should be withdrawn.

Claims 5-8, 18-21, 31-34, 52, and 53

Independent claims 5, 18, and 31 each recite in part:

determining a connectivity strength for at least one pair of symbols, the connectivity strength comprising a number of connections existing between the at least one pair of symbols, the number of connections existing between the at least one pair of symbols being one or more;

sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of the at least one pair of symbols, the sequencing comprising determining whether at least one of the at least one pair of symbols has already been placed in the wiring harness layout;

Applicants respectfully submit that Ishikawa does not show determining a connectivity strength for at least one pair of symbols, the connectivity strength comprising a number of connections existing between the at least one pair of symbols, the number of connections existing between the at least one pair of symbols being one or more, or sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of the at least one pair of symbols, the sequencing comprising determining whether at least one of the at least one pair of symbols has already been placed in the wiring harness layout, as recited in each of independent claims 5, 18, and 31.

For example, Ishikawa is understood to describe a route/wiring linking means that wire-connects a plurality of auxiliary units having positions that have been assigned by a position assigning means through a selective route on a route drawing, and linking wiring information on the auxiliary units to routing information on the selected route (*see, e.g.*, col. 2, lines 51-57, as noted in the Action). Ishikawa is also understood to describe an auxiliary unit position assigning section that reads out wiring information and makes it displayed on the screen, as well as a route/wiring linking section that wire-connects auxiliary units in a shortest route through passing points and routes on a route drawing (*see, e.g.*, col. 9, lines 6-44).

Applicants respectfully submit, however, that neither the cited section nor any other section in Ishikawa is understood to show determining a connectivity strength, let alone determining a connectivity strength for at least one pair of symbols, the connectivity strength comprising a number of connections existing between the at least one pair of symbols, the number of connections existing between the at least one pair of symbols being one or more, as recited in each of independent claims 5, 18, and 31.

Additionally, Applicants respectfully submit that nothing in Ishikawa is understood to show determining whether a symbol has already been placed in a wiring harness layout, let alone sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of the at least one pair of symbols, the sequencing comprising determining whether at least one of the at least one pair of symbols has already been placed in the wiring harness layout, as recited in each of independent claims 5, 18, and 31.

Therefore, Ishikawa does not show “determining a connectivity strength for at least one pair of symbols, the connectivity strength comprising a number of connections existing between the at least one pair of symbols, the number of connections existing between the at least one pair

of symbols being one or more,” or “sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of the at least one pair of symbols, the sequencing comprising determining whether at least one of the at least one pair of symbols has already been placed in the wiring harness layout,” as recited in each of independent claims 5, 18, and 31. Accordingly, Applicants respectfully submit that the 35 U.S.C. § 102(e) rejections should be withdrawn from independent claims 5, 18, and 31.

Dependent claims 6-8, 52, and 53; 19-21; and 32-34 depend from independent claims 5, 18, and 31, respectively, and are allowable for at least the reasons recited above in support of their parent claims 5, 18, and 31. They are also independently patentable. Accordingly, Applicants respectfully submit that the 35 U.S.C. § 102(e) rejections of claims 6-8, 19-21, 32-34, 52, and 53 should be withdrawn.

Claims 9-11, 22-24, and 35-37

Independent claims 9, 22, and 35 each recite in part:

determining a connectivity strength for at least one pair of symbols, the at least one pair of symbols having at least one connection in-between, the connectivity strength being determined by the at least one connection in-between the at least one pair of symbols;
sequencing symbol placement in a wiring harness layout for at least one bundle comprising signal-carriers, at least in part according to the connectivity strength of the at least one pair of symbols;

Applicants respectfully submit that Ishikawa does not show determining a connectivity strength for at least one pair of symbols, the at least one pair of symbols having at least one connection in-between, the connectivity strength being determined by the at least one connection in-between the at least one pair of symbols, or sequencing symbol placement in a wiring harness layout for at least one bundle comprising signal-carriers, at least in part according to the connectivity strength of the at least one pair of symbols, as recited in each of independent claims 9, 22, and 35.

For example, Ishikawa is understood to describe a route/wiring linking means that wire-connects a plurality of auxiliary units having positions that have been assigned by a position assigning means through a selective route on a route drawing, and linking wiring information on the auxiliary units to routing information on the selected route (*see, e.g.*, col. 2, lines 51-57, as noted in the Action). Ishikawa is also understood to describe an auxiliary unit position assigning

section that reads out wiring information and makes it displayed on the screen, as well as a route/wiring linking section that wire-connects auxiliary units in a shortest route through passing points and routes on a route drawing (*see, e.g.*, col. 9, lines 6-44).

Applicants respectfully submit, however, that neither the cited section nor any other section in Ishikawa is understood to show determining a connectivity strength, let alone determining a connectivity strength for at least one pair of symbols, the at least one pair of symbols having at least one connection in-between, the connectivity strength being determined by the at least one connection in-between the at least one pair of symbols, as recited in each of independent claims 9, 22, and 35.

Additionally, Applicants respectfully submit that nothing in Ishikawa is understood to show sequencing symbol placement in a wiring harness layout for at least one bundle comprising signal-carriers, at least in part according to the connectivity strength of the at least one pair of symbols, as recited in each of independent claims 9, 22, and 35.

Therefore, Ishikawa does not show “determining a connectivity strength for at least one pair of symbols, the connectivity strength comprising a number of connections existing between the at least one pair of symbols, the number of connections existing between the at least one pair of symbols being one or more,” or “sequencing symbol placement in a wiring harness layout at least in part according to the connectivity strength of the at least one pair of symbols, the sequencing comprising determining whether at least one of the at least one pair of symbols has already been placed in the wiring harness layout,” as recited in each of independent claims 5, 18, and 31. Accordingly, Applicants respectfully submit that the 35 U.S.C. § 102(e) rejections should be withdrawn from independent claims 5, 18, and 31.

Dependent claims 10-11, 23-24, and 36-37 depend from independent claims 9, 22, and 35, respectively, and are allowable for at least the reasons recited above in support of their parent claims 9, 22, and 35. They are also independently patentable. Accordingly, Applicants respectfully submit that the 35 U.S.C. § 102(e) rejections of claims 10-11, 23-24, and 36-37 should be withdrawn.

Request for Examiner Interview

If any issues remain, the Examiner is formally requested to contact the undersigned attorney prior to issuance of the next Office Action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the foregoing formal Amendment so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused.

This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

Conclusion

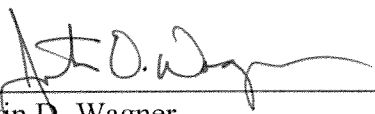
The present application is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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